

IN THE CLAIMS:

Please amend the claims as follows:

1. (Cancelled)
2. (Cancelled)
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19. (Cancelled)
20. (Cancelled)
21. (Cancelled)

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23. (Cancelled)

24. (Cancelled)

25. (New) An optoelectronic module comprising:

a substrate defining a stepped upper surface having a lower portion and an upper portion, the substrate being configured such that a lower surface thereof determines a footprint of the module;

a thermo-electric cooler disposed on the substrate;

a laser light source disposed on the thermo-electric cooler such that the thermo-electric cooler is disposed between the substrate and the laser light source, wherein the thermo-electric cooler is further thermally coupled to the laser light source to cool the laser light source; and

an electrical connection extending from the upper portion of the upper surface of the substrate to the laser light source.

26. (New) The module of claim 25, further comprising a structure defining an enclosed environment and including the substrate, wherein:

the substrate is at least partially disposed in the enclosed environment; and

the thermo electric cooler, the laser light source and the electrical connection are disposed in the enclosed environment.

27. (New) The module of claim 25, further comprising a laser light control device disposed on the upper portion of the stepped surface of the substrate and in the

enclosed environment, the electrical connection electrically coupling the laser light control device to the laser light source.

28. (New) The module of claim 25, wherein the laser light control device includes at least one of a driver and an amplifier.

29. (New) The module of claim 25, wherein the thermo-electric cooler includes a plurality of elongated thermo-electric elements disposed substantially in parallel between a top and a bottom portion of the thermo-electric cooler, the top portion of the thermo-electric cooler having a top planar surface that is substantially orthogonal to the thermo-electric elements.

30. (New) The module of claim 29, wherein the laser light source is disposed on the top planar surface of the top portion of the thermo-electric cooler.

31. (New) The module of claim 25, wherein the laser light source is disposed directly on the thermo-electric cooler.

32. (New) The module of claim 25, wherein the substrate includes a plurality of vias electrically connected to the thermo-electric cooler and adapted to dissipate thermoelectricity from the thermo-electric cooler.

33. (New) The module of claim 25, wherein the thermo-electric cooler and the upper portion of the stepped surface are disposed such that the upper portion is substantially co-planar with a top surface of the thermo-electric cooler.
34. (New) The module of claim 25, wherein the substrate includes a substrate body comprising a one-piece component.
35. (New) The module of claim 25, wherein the thermo-electric cooler is disposed on the lower portion of the stepped surface.
36. (New) The module of claim 27, wherein the substrate includes a plurality of vias electrically connected to the laser light control device.
37. (New) The module of claim 25, wherein the laser light source emits light bundles in a direction substantially parallel with a top surface of the thermo-electric cooler, the module further including an optical device disposed on the substrate and adapted to redirect the light bundles from the direction substantially parallel with the top surface of the thermo-electric cooler to a direction that is substantially orthogonal to the top surface of the thermo-electric cooler.
38. (New) The module of claim 37, wherein the optical device includes at least one of a mirror assembly and prisms.

39. (New) The module of claim 37, wherein the optical device is disposed on the thermo-electric cooler.

40. (New) The module of claim 25, wherein the substrate includes a ceramic material.

41. (New) The module of claim 25, wherein the thermo-electric cooler comprises a T-shaped bottom portion.

42. (New) The module of claim 25, wherein the laser light source comprises one of a vertical cavity surface-emitting laser device, a Fabry-Perot laser device, a distributed feedback laser device, and a laser diode device.

43. (New) The module of claim 25, further including a cap partially defining the enclosed environment, the cap being disposed on the substrate.

44. (New) The module of claim 43, further comprising an overhanged ring disposed on a perimeter of the substrate and supporting the cap thereon.

45. (New) The module of claim 43, wherein the cap includes an optical window adapted to facilitate an exit of laser light bundles from the enclosed space.

46. (New) The module of claim 45, wherein the optical window includes one of a flat glass window, a ball lens, an aspherical lens, and a GRIN lens.